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ATTORNEY DOCKET NO. **10991753-1**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Charles R. BURNETT

Serial No.: 09/559,165 **Examiner:** Rexford N. Barnie

Filing Date: April 26, 2000 **Group Art Unit:** 2643

Title: UNIVERSAL APPARATUS AND METHOD FOR INTERFACING SIGNALS WITH TELEPHONY NETWORKS

COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria VA 22313-1450

TRANSMITTAL OF APPEAL BRIEF

Sir:

Transmitted herewith is the Appeal Brief in this application with respect to the Notice of Appeal filed on July 13, 2005.

The fee for filing this Appeal Brief is (37 CFR 1.17(c)) **$500.00**.

(complete (a) or (b) as applicable)

The proceedings herein are for a patent application and the provisions of 37 CFR 1.136(a) apply.

☐ (a) Applicant petitions for an extension of time under 37 CFR 1.136 (fees: 37 CFR 1.17(a)(1)-(5)) for the total number of months checked below:

☐	one month	$ 120.00
☐	two months	$ 450.00
☐	three months	$1020.00
☐	four months	$1590.00

☐ The extension fee has already been filled in this application.

☒ (b) Applicant believes that no extension of term is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition and fee for extension of time.

Please charge to Deposit Account **50-1078** the sum of $500.00. At any time during the pendency of this application, please charge any fees required or credit any overpayment to Deposit Account **50-1078** pursuant to 37 CFR 1.25.

A duplicate copy of this transmittal letter is enclosed.

☐ I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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Respectfully submitted,

Charles R. BURNETT

By _____

Michael A. Bush
Attorney/Agent for Applicant(s)

Reg. No. 48,893

Date: September 13, 2005

Telephone No. 202-434-1500

Attorney Docket No. 10991753-1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:

Charles R. BURNETT

Serial No. 09/559,165 Group Art Unit: 2643

Confirmation No. 1603

Filed: April 26, 2000 Examiner: Rexford N. BARNIE

For: UNIVERSAL APPARATUS AND METHOD FOR INTERFACING SIGNALS WITH TELEPHONY NETWORKS

APPEAL BRIEF UNDER 37 CFR § 41.37

Commissioner for Patents
Board of Patent Appeals and Interferences
United States Patent and Trademark Office
PO Box 1450
Alexandria, VA 22313-1450

Sir:

Pursuant to the Appellant's earlier filed Notice of Appeal on July 13, 2005, the Appellant appealed the Examiner's January 14, 2005 Office Action finally rejecting claims 1, 2, 4-8, 10, 11, 13-15 and 17-23. Appellant's Brief together with the requisite fees set forth in 37 CFR § 1.17 is submitted herewith.

Table of Contents

I. Real Party in Interest (37 CFR §41.37(c)(1)(i))

The real party in interest is AGILENT TECHNOLOGIES, the assignee of the subject application.

II. Related Appeals and Interferences (37 CFR §41.37(c)(1)(ii))

The Appellant and the undersigned representative are not aware of any other appeals or interferences that will directly affect or be directly affected by, or have a bearing on, the Board's decision in the pending appeal.

III. Status of Claims (37 CFR §41.37(c)(1)(iii))

Claims 1, 7, 11, and 15 are independent claims, and claims 2, 4-6, 8, 10, 13, 14, and 17-23 are dependent claims. Claims 3, 9, 12, and 16 have been cancelled.

In view of the final Office Action mailed January 14, 2005, claims 1, 2, 4-8, 10, 11, 13-15 and 17-23 stand finally rejected, and are the subject of this appeal.

IV. Status of Amendments (37 CFR §41.37(c)(1)(iv))

All amendments filed have been entered, and no amendments have been filed since the final Office Action mailed January 14, 2005.

V. Summary of Claimed Subject Matter (37 CFR §41.37(c)(1)(v))

Pursuant to 37 C.F.R. §1.192(c)(5), the presently claimed invention is directed to:

independent claim 1, which recites: "1. A communication apparatus communicating with telephony networks, comprising: memory storing sets of impedance control values respectively simulating a plurality of circuit impedances (e.g., p. 10, lines 7-10); a processor configured to: automatically detect an impedance characteristic of a telephony network to which the communication apparatus is connected (e.g., p. 11, lines 16-18); automatically select one of said sets of impedance control values based on said detected impedance characteristic (e.g., p. 11, lines 21-24); and combine data to be transmitted over said telephony network with said selected set of impedance control values (e.g., p. 9, line 22 to p. 10, line 6); a digital-to-analog converter that converts the combined data and said selected set of impedance control values into analog signals (e.g., p. 6, lines 2-4, and p. 9, line 25 to p. 10, line 4); and an interface port connected to said telephony network that transmits the output of the digital-to-analog converter over the telephony network, wherein the impedance required by the telephony network is simulated based on the selected set of impedance control values (e.g., p. 5, lines 21-22, p. 6, lines 2-8, and lines 9-15, and p. 10, lines 12-15).";

claim 2, which recites: "2. The communication apparatus of claim 1, wherein said processor is configured to continuously transmit said selected set of impedance control values during said communication session (e.g., p. 9, lines 12-17).";

independent claim 7, which recites: "7. A communication apparatus communicating with telephony networks, comprising: means for storing sets of impedance control values used for simulating a plurality of circuit impedances (e.g., p. 10, lines 7-10); means for automatically detecting an impedance characteristic of a telephony network to which the communication apparatus is connected (e.g., p. 11, lines 16-18); means for automatically selecting one of said sets of impedance control values based on said detected impedance characteristic (e.g., p. 11, lines 21-24); means for combining data to be transmitted over said telephony network with said selected set of impedance control values (e.g., p. 9, line 22 to p. 10, line 6); means for converting said combined data and said selected set of impedance control values into analog signals (e.g., p. 6, lines 2-4, and p. 9, line 25 to p. 10, line 4); and means for transmitting said analog signals over said telephony network, wherein the impedance required by the

telephony network are simulated based on the selected set of impedance control values (e.g., p. 5, lines 21-22, p. 6, lines 2-8, and lines 9-15, and p. 10, lines 12-15).";

claim 8, which recites: "8. The communication apparatus of claim 7, wherein said transmitting means continuously transmits said selected set of impedance control values during said communication session (e.g., p. 9, lines 12-17).";

independent claim 11, which recites: "11. A method for communicating with telephony networks, comprising the operations of: providing an interface port (e.g., p. 5, lines 21-22); interfacing said interface port with a communication connection of a telephony network (e.g., p. 5, lines 21-22); storing sets of impedance control values used for simulating a plurality of circuit impedances (e.g., p. 10, lines 7-10); automatically detecting an impedance characteristic of the telephony network to which the interface port is interfaced (e.g., p. 11, lines 16-18); automatically selecting one of said sets of impedance control values based on said detected impedance characteristic (e.g., p. 11, lines 21-24); combining data to be transmitted over said telephony network with said selected set of impedance control values (e.g., p. 9, line 22 to p. 10, line 6); converting said combined data and said selected set of impedance control values into analog signals (e.g., p. 6, lines 2-4, and p. 9, line 25 to p. 10, line 4); transmitting said analog signals over the telephony network; and simulating the impedance required by the telephony network based on the selected set of impedance control values (e.g., p. 5, lines 21-22, p. 6, lines 2-8, and lines 9-15, and p. 10, lines 12-15).";

independent claim 15, which recites: "15. A method for communicating with telephony networks, comprising the operations of: providing an interface port (e.g., p. 5, lines 21-22); interfacing said interface port with a communication connection of a telephony network (e.g., p. 5, lines 21-22); automatically detecting an impedance characteristic of said telephony network (e.g., p. 11, lines 16-18); transmitting analog signals to said interface port, said analog signals having voltages (e.g., p. 9, lines 8-11); automatically varying said voltages of said analog signals such that said interface port continuously simulates said detected impedance during a communication session in response to said analog signals (e.g., p. 9, lines 8-17); and combining values from said selected set of impedance control values with data that is to be communicated from said interface port to a remote communication device (e.g., p. 9, line 22 to p. 10, line 6).";

claim 17, which recites: "17. The method of claim 15, further comprising the operations of: storing sets of impedance control values (e.g., p. 10, lines 7-10);

automatically selecting one of said sets of impedance control values based on said detected impedance characteristic (e.g., p. 11, lines 21-24); serially and continuously transmitting said selected set of impedance control values to a digital-to-analog converter during said communication session (e.g., p. 9, lines 7-17); producing said analog signals at said digital-to-analog converter (e.g., p. 9, lines 7-8); and performing said automatically varying operation based on said selected set of impedance control values (e.g., p. 9, lines 8-17).";

claim 20, which recites: "20. The communication apparatus of claim 1, wherein the impedance characteristic of the telephony network to which the communication apparatus is connected comprises at least one of an AC line impedance, a network balance impedance, a DC line impedance, or a ringer impedance (e.g., p. 5, lines 13-17, and p. 1, lines 14-16).";

claim 21, which recites: "21. The communication apparatus of claim 7, wherein the impedance characteristic of the telephony network to which the communication apparatus is connected comprises at least one of an AC line impedance, a network balance impedance, a DC line impedance, or a ringer impedance (e.g., p. 5, lines 13-17, and p. 1, lines 14-16).";

claim 22, which recites: "22. The communication apparatus of claim 11, wherein the impedance characteristic of the telephony network to which the interface port is connected comprises at least one of an AC line impedance, a network balance impedance, a DC line impedance, or a ringer impedance (e.g., p. 5, lines 13-17, and p. 1, lines 14-16)."; and

claim 23, which recites: "23. The communication apparatus of claim 15, wherein the impedance characteristic of the telephony network comprises at least one of an AC line impedance, a network balance impedance, a DC line impedance, or a ringer impedance (e.g., p. 5, lines 13-17, and p. 1, lines 14-16)."

VI. Issue To Be Reviewed On Appeal (37 CFR §41.37(c)(1)(vi))

The issue for review is:

(A) Whether claims 1, 2, 4-8, 10, 11, 13-15, and 17-23 are unpatentable under 35 U.S.C. §103(a), over Rahamim et al. (U.S. Patent No. 6,081,586) in view of Dahan et al. (U.S. Patent No. 6,611,580) or Frantz et al. (U.S. Patent No. 5,802,169).

VII. Argument (37 CFR §41.37(c)(1)(vii))

A. Whether claims 1, 2, 4-8, 10, 11, 13-15, and 17-23 are unpatentable under 35 U.S.C. §103(a), over Rahamim et al. (U.S. Patent No. 6,081,586) in view of Dahan et al. (U.S. Patent No. 6,611,580) or Frantz et al. (U.S. Patent No. 5,802,169)

In the Final Office Action mailed January 14, 2005, at page 2, the Examiner rejected claims 1, 2, 4-8, 10, 11, 13-15, and 17-23 under 35 U.S.C. §103(a) as being unpatentable over Rahamim et al. (U.S. Patent No. 6,081,586 – hereinafter Rahamim) in view of Dahan et al. (U.S. Patent No. 6,611,580 – hereinafter Dahan) or Frantz et al. (U.S. Patent No. 5,802,169 – hereinafter Frantz)

Appellant respectfully submits that the following presents new arguments as well as arguments based on those presented in the Response filed April 13, 2005.

The Examiner erred by failing to provide evidence that the individual elements exist in the prior art. Additionally, the Examiner erred by failing to provide evidence of a motivation that existed in the prior art and which would have motivated one of ordinary skill in the art to make the combination in the manner set forth in the office action.

As a general matter, to establish a prima facie obviousness rejection, the Examiner needs to provide evidence of the existence of individual elements corresponding to the recited limitations, a motivation to combine the individual elements to create the recited invention, and a reasonable expectation of success. (See MPEP, at 2143. – "'[t]he teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure.' In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).", and at 2143.03 – "'[t]o establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art.' In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974).").

1. The Examiner erred by failing to provide evidence that the individual elements exist in the prior art.

   a. Independent claims 1, 7, 11, and 15

The Examiner appears to assert that Rahamim teaches each element of the independent claims, "but fails to teach 'automatic'...." Additionally, the Examiner

appears to assert that each of Dahan, and Frantz cure this defect. Appellant respectfully disagrees.

i. Combining data to be transmitted over said telephony network with selected set of impedance control values

Independent claim 1 recites: "...a processor configured to:..combine data to be transmitted over said telephony network with said selected set of impedance control values...."

Independent claim 7 recites: "...means for combining data to be transmitted over said telephony network with said selected set of impedance control values...."

Independent claim 11 recites: "...combining data to be transmitted over said telephony network with said selected set of impedance control values...."

And independent claim 15 recites: "...combining values from said selected set of impedance control values with data that is to be communicated from said interface port to a remote communication device."

Rahamim discloses a "programmable measurement circuitry 156...with adjustable parameters for measuring tip/ring voltage and loop current conditions on the lines of the telephone network 110." (Rahamim col. 8, lines 13-16). Rahamim also discloses: "[p]rogrammable line/ring impedance circuitry 162 is also provided to allow the DAA or host system circuitry 116 to program the electrical characteristics of the DAA as seen by the telephone network 110 to facilitate compliance with a variety of regulatory standards, including country-by-country ring loading." (Rahamim col. 8, lines 31-34).

While the programmable line/ring impedance circuitry 162 may modify an impedance of the device disclosed in Rahamim, Appellant respectfully submits that Rahamim neither discloses nor suggests combining data to be transmitted over a telephony network with impedance control values.

Frantz discloses a device that transmits a series of tones, each tone being a single test frequency, and measures reflected power at each frequency. Then the device calculates an actual return loss measurement for each frequency, and attempts to match the actual return loss measurements with return losses correlated to a predetermined impedance model. (See Frantz, at col. 5, lines 6-44).

Appellant respectfully submits that Frantz neither discloses nor suggests combining data to be transmitted over said telephony network with said selected set of impedance control values.

Dahan discloses a modem that measures line voltage and determines whether the line voltage is sufficient to allow the modem to operate. If not, the modem incrementally modifies the loophold current in an attempt to set up initial operating conditions for the modem. If the modem reaches a minimum desired loophold current and has not yet achieved a sufficient line voltage, the modem adjusts an impedance of a gyrator circuit and again measures the line voltage. If the gyrator impedance reaches a maximum and the measured line voltage is still too low, the modem aborts the attempt to communicate. Additionally, Dahan discloses that the modem could adjust the gyrator impedance first and then adjust the loophold current. (See Dahan, at col. 9, line 41 to col. 10, line 45).

Appellant respectfully submits that Dahan neither discloses nor suggests combining data to be transmitted over said telephony network with said selected set of impedance control values.

In the Advisory Action mailed May 23, 2005, the Examiner asserts: "for the modem to transmit data, it would have to transmit information using the adjusted impedance control level in order to match that of the network as long as the modem is communicating." But the Examiner provides no basis for such an assertion.

To the extent that the Examiner believes Rahamim, Frantz, or Dahan discloses such a feature based upon personal knowledge, personal knowledge, when used as a basis for a rejection, must be supported by an affidavit as to the specifics of the facts of that knowledge when called for by the applicant. (See, MPEP 2144.03, 37 C.F.R. § 1.104(d)(2).) In short, the rules of the U.S. Patent and Trademark Office require that the Examiner must either support this assertion with an Affidavit, or withdraw the rejection. Therefore, Appellant respectfully requests that the Examiner support the rejection with either an affidavit or a reference, or withdraw the rejections of claims 1, 7, 11, and 15.

Further, even assuming *arguendo* that the Examiner's assertion is true, Appellant respectfully submits that there is no basis to assert, given the teachings of Rahamim, Frantz, and Dahan, that transmitting information using a given impedance control level is

the same as combining data to be transmitted over said telephony network with said selected set of impedance control values.

Thus, Appellant respectfully submits that none of Rahamim, Frantz, or Dahan, either alone or in combination, disclose or suggest combining data to be transmitted over said telephony network with said selected set of impedance control values.

Accordingly, Appellant respectfully submits that the Examiner has failed to provide evidence that the individual elements exist in the prior art, and thus, the Examiner has not provided sufficient evidence to maintain a prima facie obviousness rejection of the claims.

ii. Automatically detecting an impedance characteristic of a telephony network

Independent claim 1 recites: "...a processor configured to: automatically detect an impedance characteristic of a telephony network to which the communication apparatus is connected...."

Independent claim 7 recites: "...means for automatically detecting an impedance characteristic of a telephony network to which the communication apparatus is connected...."

Independent claim 11 recites: "...automatically detecting an impedance characteristic of the telephony network to which the interface port is interfaced...."

And independent claim 15 recites: "...automatically detecting an impedance characteristic of said telephony network...."

As noted above, Rahamim discloses a "programmable measurement circuitry 156...with adjustable parameters for measuring tip/ring voltage and loop current conditions on the lines of the telephone network 110." (Rahamim col. 8, lines 13-16). Rahamim also discloses: "[p]rogrammable line/ring impedance circuitry 162 is also provided to allow the DAA or host system circuitry 116 to program the electrical characteristics of the DAA as seen by the telephone network 110 to facilitate compliance with a variety of regulatory standards, including country-by-country ring loading." (Rahamim col. 8, lines 31-34).

But the programmable measurement circuitry 156 does not automatically detect an impedance characteristic of a telephony network. Thus, Appellant respectfully

submits that Rahamim neither discloses nor suggests automatically detecting an impedance characteristic of said telephony network.

And as noted above, Frantz discloses a device that transmits a series of tones, each tone being a single test frequency, and measures reflected power at each frequency. Then the device calculates an actual return loss measurement for each frequency, and attempts to match the actual return loss measurements with return losses correlated to a predetermined impedance model. (See Frantz, at col. 5, lines 6-44).

Appellant respectfully submits that Frantz neither discloses nor suggests automatically detecting an impedance characteristic of said telephony network.

Regarding Dahan, the Examiner asserts that "Dahan teaches a method and system for adaptively adjusting modem operating characteristics in (see col. 2 lines 23-41) wherein impedance level can be detected and automatically adjusted based on detected line characteristics for some modem. According to Dahan, it could be done in some cases thus rendering it as prior art." Appellants respectfully disagree.

The section of Dahan cited by the Examiner recites:

> "According to another aspect, the line interface circuit is electrically adaptable to meet desired and required operating characteristics. The circuit may, for instance, have selectively modifiable impedance and current segments. The control logic may cause these segments to change states so as to change the overall operating characteristics of the modem.
>
> In this regard, if the modem had a way to know the voltage provided by the central office and the line impedance (along the telephone line between the central office and the modem), then the modem could adapt its operating characteristic as presently contemplated to interface with the telephone line in a way that would comply with applicable specifications. In particular, by knowing the supply voltage and the line impedance, control logic in the modem could readily compute the line voltage at the modem given various levels of modem impedance. Thus, the control logic could then adjust the modem impedance so as to comply with the applicable specification." (Dahan, col. 2, lines 23-41, emphasis added).

Thus the teachings as asserted by the Examiner are preceded by the conditional premise, "if the modem had a way to know the voltage provided by the central office and the line impedance."

Additionally, in contrast to the Examiner's characterization of Dahan, the section immediately following the section cited by the Examiner recites:

> "In most cases, however, it is not possible to directly measure the actual line impedance, or at least to do so quickly enough to reach an acceptable operating state within an acceptable timeframe. (The European specification, for instance, requires a modem to reach the specified operating range within 20 milliseconds).
>
> Thus, rather than actually measuring the line impedance, an exemplary embodiment of the invention starts by assuming what the line voltage will be. "(Dahan, col. 2, lines 41-49).

Thus, contrary to the Examiner's characterization, Dahan does not state that it is possible to directly measure the actual line impedance.

In the Advisory Action mailed May 23, 2005, the Examiner even states that "(Dahlan) (*sic*) might not be certain with regard to automatic detection," but continues to assert that the idea is rendered as prior art. Appellant respectfully disagrees.

Regarding implicit disclosure, MPEP §2144.01 quotes In re Preda: "[I]n considering the disclosure of a reference, it is proper to take into account not only specific teachings of the reference but also the inferences which one skilled in the art would reasonably be expected to draw therefrom." (In re Preda, 401 F.2d 825, 826, 159 USPQ 342, 344 (CCPA 1968)).

While a fair reading of Dahan might suggest that it is possible, in some limited cases, to directly measure the actual line impedance, Dahan does not disclose any such case. Appellant respectfully submits that the inference to be drawn by one of ordinary skill in the art from Dahan is that in the majority of cases, it is not possible to directly measure the actual line impedance, or at best, if it is possible, it cannot be done quickly enough to be useful for telecommunications, particularly since the device disclosed in Dahan eschews measurement of the actual line impedance, and instead employs an alternative method of measuring line voltage, as noted above. (See Dahan, at col. 9, line 41 to col. 10, line 45).

Thus, Appellant respectfully submits that Dahan neither discloses nor suggests automatically detecting an impedance characteristic of said telephony network.

Accordingly, Appellant respectfully submits that the Examiner has failed to provide evidence that the individual elements exist in the prior art, and thus, the

Examiner has not provided sufficient evidence to maintain a prima facie obviousness rejection of the claims.

b. Dependent claims 2, 8, and 17

Regarding claims 2, 4-6, 8, 10, 13, 14, and 15-19, the Examiner asserts that the "combination teaches and renders obvious all the claimed subject matter of being able to control impedance either manually or automatically." Appellant respectfully disagrees.

Claim 2, recites: "...wherein said processor is configured to continuously transmit said selected set of impedance control values during said communication session."

Claim 8 recites: "...wherein said transmitting means continuously transmits said selected set of impedance control values during said communication session."

And claim 17 recites: "...serially and continuously transmitting said selected set of impedance control values to a digital-to-analog converter during said communication session...."

Appellant respectfully submits that Rahamim, either alone or in combination with either of Dahan or Frantz, neither discloses nor suggests "...wherein said processor is configured to continuously transmit said selected set of impedance control values during said communication session."

Accordingly, Appellant respectfully submits that the Examiner has failed to provide evidence that the individual elements exist in the prior art, and thus, the Examiner has not provided sufficient evidence to maintain a prima facie obviousness rejection of the claims.

c. Dependent claims 20-23

Regarding claims 20-23, the Examiner asserts that the combination teaches that impedance characteristics would include line impedance data. Appellant respectfully disagrees.

Each of claims 20-23 recite: "...wherein the impedance characteristic of the telephony network to which the communication apparatus is connected comprises at

least one of an AC line impedance, a network balance impedance, a DC line impedance, or a ringer impedance."

While col. 8 of Rahamim discloses measuring tip/ring voltage and loop current conditions, and also discloses circuitry line current sensing and determining Central Office battery and loop DC resistance, Appellant respectfully submits that Rahamim, either alone or in combination with either of Dahan or Frantz, neither discloses nor suggests that the impedance characteristic of the telephony network to which the communication apparatus is connected comprises at least one of an AC line impedance, a network balance impedance, a DC line impedance, or a ringer impedance.

Accordingly, Appellant respectfully submits that the Examiner has failed to provide evidence that the individual elements exist in the prior art, and thus, the Examiner has not provided sufficient evidence to maintain a prima facie obviousness rejection of the claims.

2. The Examiner erred by failing to provide evidence of a motivation that existed in the prior art and which would have motivated one of ordinary skill in the art to make the combination in the manner set forth in the office action.

Should the Examiner fail to provide evidence that the individual elements exist in the prior art, or that the motivation exists in the prior art or in the knowledge generally available to one of ordinary skill in the art, then the Examiner has not provided sufficient evidence to maintain a prima facie obviousness rejection of the claim. (See MPEP, at 2143.03, and 2143.01). Thus, the burden is initially on the Examiner to provide evidence as to why one of ordinary skill in the art would have been motivated to combine the individual elements to create the recited invention, and to demonstrate that this evidence existed in the prior art or in the knowledge generally available to one of ordinary skill in the art. (MPEP 2143.01).

As stated in the MPEP, "[t]he mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination." (MPEP 2143.01 – referring to In re Mills, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990)).

The Examiner states that the motivation to combine Rahamim with either Dahan or Frantz is to make it "possible to provide a modem capable of conforming to different location standards or regulation without having to purchase another one."

But the Abstract of Rahamim recites:

> "In an alternate embodiment of the invention, the line side circuitry of the modem further includes programmable detection and measurement circuitry that is programmable to measure electrical characteristics (e.g., tip/ring voltage and loop current) of the telephone line interface connection and is capable of corresponding adjustments to enable compliance with applicable regulations. The system is software programmable via control signals sent across the high voltage isolation barrier to establish electrical parameters corresponding to a specific country where the equipment may be used."

Thus Rahamim alone appears to meet the goal as asserted by the Examiner. Accordingly, Appellant respectfully submits that one of ordinary skill in the art would not be motivated to look elsewhere and combine the references as suggested by the Examiner.

Further, Appellant respectfully submits that Dahan teaches away from the present invention.

In Dahan, as noted above, rather than actually measuring the line impedance, an exemplary embodiment of the invention starts by assuming what the line voltage will be. (See Dahan, at col. 2, lines 47-49). Then, the device measures line voltage and determines whether the line voltage is sufficient to allow the modem to operate. If not, the modem incrementally modifies the loophold current in an attempt to set up initial operating conditions for the modem. If the modem reaches a minimum desired loophold current and has not yet achieved a sufficient line voltage, the modem adjusts an impedance of a gyrator circuit and again measures the line voltage. If the gyrator impedance reaches a maximum and the measured line voltage is still too low, the modem aborts the attempt to communicate. Additionally, Dahan discloses that the modem could adjust the gyrator impedance first and then adjust the loophold current. (See Dahan, at col. 9, line 41 to col. 10, line 45).

Accordingly, Appellant respectfully submits that Dahan teaches away from the claimed invention, which automatically detects an impedance characteristic of a telephony network. As such, Appellant respectfully submits that one of ordinary skill in

the art would not be motivated to combine Rahamim with Dahan as suggested by the Examiner.

Thus, Appellant respectfully submits that there is insufficient evidence of a motivation that existed in the prior art and which would have motivated one of ordinary skill in the art to make the combination in the manner set forth in the office action.

Accordingly, Appellant respectfully submits that the Examiner has failed to provide evidence that the motivation to combine the references as suggested by the Examiner exists in the prior art or in the knowledge generally available to one of ordinary skill in the art, and thus, the Examiner has not provided sufficient evidence to maintain a prima facie obviousness rejection of the claims.

Appellant respectfully submits that independent claims 1, 7, 11, and 15 patentably distinguish over the cited art, and should be allowable for at least the above-mentioned reasons.

MPEP 2143.03 cites: "[i]f an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious." In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

Accordingly, Appellant respectfully submits that claims 2, 4-6, 8, 10, 13, 14, and 17-23, which ultimately depend from one of independent claims 1, 7, 11, or 15, should be allowable for at least the same reasons as claims 1, 7, 11, and 15, as well as for the additional features recited therein.

VIII. Conclusion:

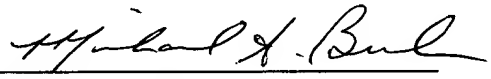
In view of the law and facts stated herein, the Appellant respectfully submits that reasoning and the references cited by the Examiner are insufficient to maintain an obviousness rejection of the claims. Appellant respectfully urges that the rejection of claims 1, 2, 4-8, 10, 11, 13-15 and 17-23 under 35 U.S.C. §103(a) is improper. Reversal of the rejections in this appeal is respectfully requested.

The Commissioner is hereby authorized to charge any additional fees required in connection with the filing of the Appeal Brief to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Date: September 13, 2005

By: 

Michael A. Bush
Registration No. 48,893

IX. Claims Appendix (37 CFR § 41.37(c)(1)(viii))

1. (Previously Presented) A communication apparatus communicating with telephony networks, comprising:

memory storing sets of impedance control values respectively simulating a plurality of circuit impedances;

a processor configured to:

automatically detect an impedance characteristic of a telephony network to which the communication apparatus is connected;

automatically select one of said sets of impedance control values based on said detected impedance characteristic; and

combine data to be transmitted over said telephony network with said selected set of impedance control values;

a digital-to-analog converter that converts the combined data and said selected set of impedance control values into analog signals; and

an interface port connected to said telephony network that transmits the output of the digital-to-analog converter over the telephony network, wherein the impedance required by the telephony network is simulated based on the selected set of impedance control values.

2. (Original) The communication apparatus of claim 1, wherein said processor is configured to continuously transmit said selected set of impedance control values during said communication session.

3. (Cancelled)

4. (Original) The communication apparatus of claim 1, further comprising an input device configured to receive an input from a user, said processor configured to select said selected set of impedance control values based on said input.

5. (Previously Presented) The communication apparatus of claim 1, wherein said processor is further configured to identify, based on said detected impedance characteristic, which of said sets of impedance control values, when converted to analog signals and transmitted to said interface port, causes said interface port to simulate said impedance that substantially matches said impedance of said telephony network.

6. (Original) The communication apparatus of claim 5, wherein each of said sets of impedance control values, when converted to analog signals and transmitted to said interface port, causes said interface port to simulate a different impedance.

7. (Previously Presented) A communication apparatus communicating with telephony networks, comprising:

means for storing sets of impedance control values used for simulating a plurality of circuit impedances;

means for automatically detecting an impedance characteristic of a telephony network to which the communication apparatus is connected;

means for automatically selecting one of said sets of impedance control values based on said detected impedance characteristic;

means for combining data to be transmitted over said telephony network with said selected set of impedance control values;

means for converting said combined data and said selected set of impedance control values into analog signals; and

means for transmitting said analog signals over said telephony network, wherein the impedance required by the telephony network are simulated based on the selected set of impedance control values.

8. (Original) The communication apparatus of claim 7, wherein said transmitting means continuously transmits said selected set of impedance control values during said communication session.

9. (Cancelled)

10. (Original) The communication apparatus of claim 7, further comprising a means for receiving an input from a user, said selecting means configured to select said selected set of impedance control values based on said input.

11. (Previously Presented) A method for communicating with telephony networks, comprising the operations of:

providing an interface port;

interfacing said interface port with a communication connection of a telephony network;

storing sets of impedance control values used for simulating a plurality of circuit impedances;

automatically detecting an impedance characteristic of the telephony network to which the interface port is interfaced;

automatically selecting one of said sets of impedance control values based on said detected impedance characteristic;

combining data to be transmitted over said telephony network with said selected set of impedance control values;

converting said combined data and said selected set of impedance control values into analog signals;

transmitting said analog signals over the telephony network; and

simulating the impedance required by the telephony network based on the selected set of impedance control values.

12. (Cancelled)

13. (Previously Presented) The method of claim 11, further comprising the operations of:

receiving an input; and

performing said selecting operation based on said input.

14. (Previously Presented) The method of claim 11, further comprising the operations of:

interfacing said interface port with a communication connection of another telephony network;

automatically detecting an impedance characteristic of said other telephony network;

automatically selecting another of said sets of impedance control values based on said another detected impedance characteristic;

serially transmitting said other selected set of impedance control values to said digital-to-analog converter;

converting, at said digital-to-analog converter, said other set of impedance control values into other analog signals;

simulating another impedance at said interface port based on said other analog signals; and

performing said automatically selecting another of said sets of impedance control values operation such that said other impedance substantially matches said impedance of said other telephony network as measured from said other communication connection.

15. (Previously Presented) A method for communicating with telephony networks, comprising the operations of:

providing an interface port;

interfacing said interface port with a communication connection of a telephony network;

automatically detecting an impedance characteristic of said telephony network;

transmitting analog signals to said interface port, said analog signals having voltages;

automatically varying said voltages of said analog signals such that said interface port continuously simulates said detected impedance during a communication session in response to said analog signals; and

combining values from said selected set of impedance control values with data that is to be communicated from said interface port to a remote communication device.

16. (Cancelled)

17. (Previously Presented) The method of claim 15, further comprising the operations of:

storing sets of impedance control values;

automatically selecting one of said sets of impedance control values based on said detected impedance characteristic;

serially and continuously transmitting said selected set of impedance control values to a digital-to-analog converter during said communication session;

producing said analog signals at said digital-to-analog converter; and

performing said automatically varying operation based on said selected set of impedance control values.

18. (Previously Presented) The method of claim 17, further comprising the operations of:

receiving an input; and

performing said automatically selecting operaiton based on said input.

19. (Previously Presented) The method of claim 17, further comprising the operations of:

interfacing said interface port with a communication connection of another telephony network;

automatically detecting an impedance characteristic of said other telephony network;

transmitting other analog signals to said interface port, said other analog signals having other voltages;

automatically varying said other voltages of said other analog signals;

causing said interface port to continuously simulate a particular impedance during another communication session in response to said other analog signals;

selecting another of said sets of impedance control values based on said detected impedance characteristic of said other telephony network;

serially and continuously transmitting said other selected set of impedance control values to said digital-to-analog converter during another communications session;

producing said other analog signals at said digital-to-analog converter; and

performing said automatically varying said other voltages operation based on said other selected set of impedance control values.

20. (Previously Presented) The communication apparatus of claim 1, wherein the impedance characteristic of the telephony network to which the communication apparatus is connected comprises at least one of an AC line impedance, a network balance impedance, a DC line impedance, or a ringer impedance.

21. (Previously Presented) The communication apparatus of claim 7, wherein the impedance characteristic of the telephony network to which the communication apparatus is connected comprises at least one of an AC line impedance, a network balance impedance, a DC line impedance, or a ringer impedance.

22. (Previously Presented) The communication apparatus of claim 11, wherein the impedance characteristic of the telephony network to which the interface port is connected comprises at least one of an AC line impedance, a network balance impedance, a DC line impedance, or a ringer impedance.

23. (Previously Presented) The communication apparatus of claim 15, wherein the impedance characteristic of the telephony network comprises at least one of an AC line impedance, a network balance impedance, a DC line impedance, or a ringer impedance.

X. Evidence Appendix (37 CFR § 41.37(c)(2))

None

XI. Related Proceedings Appendix (37 CFR § 41.37(c)(2))

None